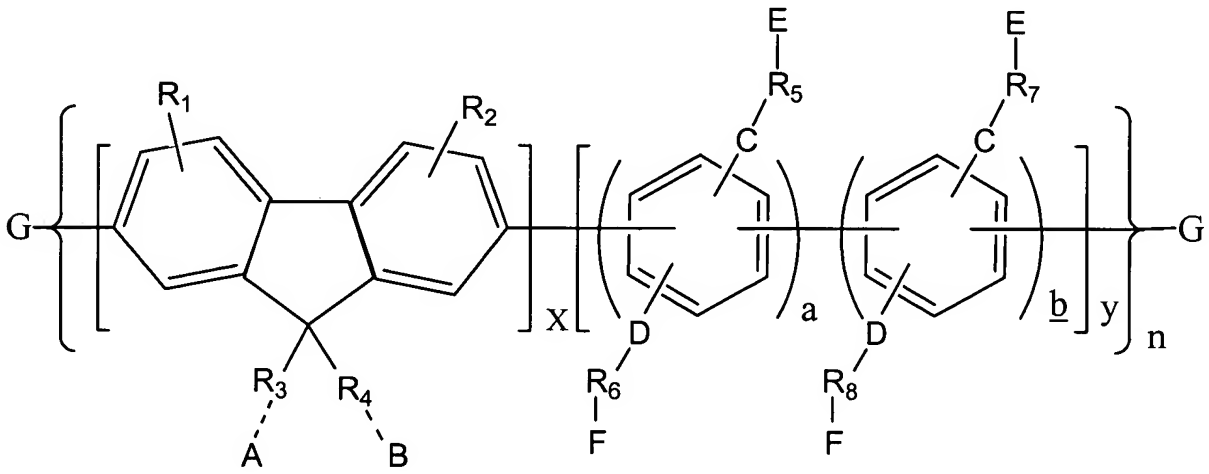
IN THE CLAIMS:

Claims 22-31, 43-46 and 54-59 have been canceled. Claims 1-21, 32-42 and 47-53 have been amended herein and new claims 60-65 have been added. All of the pending claims 1 through 65 are presented below. This listing of claims will replace all prior versions and listings in the application. Please enter these claims as amended.

1. (Currently Amended) ~~Conjugated polymers of~~ A conjugated polymer comprising the formula:



wherein:

• ——R_1 and R_2 are identical or different and are each H, a straight or branched alkyl, alkoxyl, ester groups or cyclic crown ether groups having from 1 to about 22 carbon atoms;

• ——A, B, E and F are identical or different and are each H, ~~Si R'R"~~ SiR'R" or NR'R" ~~(but can not all be H or SiR'R")~~(wherein at least one of A, B, E and F is NR'R"); ~~R',~~ R' and R" are independently selected from the group consisting of hydrogen, unbranched or branched alkyl or alkoxyl groups having 1 to about 12 carbon atoms, and (C3 to C10) cycloalkyl groups;

• ——C and D are identical or different and are each H (but ~~can~~ are not both ~~be~~ H), O, S, CO, COO, CRR', NR', ~~Si R'R"~~SiR'R", wherein R' and R" are as defined above;

R_3 and R_4 are identical or different and are independently selected from linear, branched or cyclical saturated or unsaturated aliphatic moieties that contain at least one heteroatom;

- ~~R_3, R_4,~~ R_5, R_6, R_7 and R_8 are identical or different and are independently selected from ~~linear or~~ linear, branched or cyclical saturated or unsaturated aliphatic moieties ~~which may~~ that contain ~~one or more heteroatoms~~ at least one heteroatom and ~~which may~~ that contain ~~one or more aromatic groups~~ at least one aromatic group, substituted or unsubstituted aromatic ~~moieties~~moiety;

- G is hydrogen, halogen, boronic acid, boronate radical or an aryl moiety;

- a and b are ~~independent~~ independently selected and each is a number from 0 to about 100, wherein if a is 0, b is a number from 1 to about 100 and if b is 0, a is a number from 1 to about 100;

- x and y are ~~also independent~~ independently selected and each is a number from ~~0~~ 1 to about 100; and

- n is a number from 1 to about 1000.

2. (Currently Amended) ~~A~~ The conjugated polymer according to claim 1, wherein the ~~polymers are homopolymers~~conjugated polymer is a homopolymer.

3. (Currently Amended) ~~A~~ The conjugated polymer according to claim 1, wherein the ~~polymers are random copolymers~~ conjugated polymer is a random copolymer.

4. (Currently Amended) ~~A~~ The conjugated polymer according to claim 1, wherein the ~~polymers are alternated copolymers~~ conjugated polymer is an alternated copolymer.

5. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of the claims 1 to 4~~ claim 1, wherein R_1 and R_2 are H or straight or branched alkyl groups having from 1 to about 12 carbon atoms.

6. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, wherein R_1 and R_2 are alkoxyl groups with from 1 to about 12 carbon atoms.

7. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, ~~where~~ wherein R′ and ~~R'~~ R″ are alkyl or alkoxyl groups having from 1 to 4 carbon atoms.

8. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims to 4~~ claim 1, wherein A, B, E and F are independently selected from hydrogen or NR′R″ (but not all ~~can be~~ are hydrogen).

9. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~claim 1, wherein R_3 and R_4 are linear or branched aliphatic ~~chains,~~ chains having at least one of from 1 to 4 carbon ~~atoms,~~ atoms containing ~~one or more heteroatoms and/or~~ at least one heteroatom and~~one or more aromatic groups~~ at least one aromatic group.

10. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~claim 1, wherein R_3 and R_4 are alkoxyl groups having from 2 to about 12 carbon atoms.

11. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, wherein R_5, R_6, R_7 and R_8 are linear or branched aliphatic ~~chains,~~chains having from 1 to about 8 carbon ~~atoms,~~atoms containing ~~one or more heteroatoms~~ at least one heteroatom.

12. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, wherein R_5, R_6, R_7 and R_8 are alkoxyl groups having from 2 to about 12 carbon atoms.

13. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~claim 1, wherein x and y are each a number between ~~0~~ 1 and 20.

14. (Currently Amended) ~~A~~ The conjugated polymer according to claim 13, wherein x and y are each a number between ~~0~~ 1 and 10.

15. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, wherein a and b are each a number between 0 and 10.

16. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, wherein n is a number between 1 and about 50.

17. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, wherein G is an aryl moiety containing halogen, boronic acid or boronate radical.

18. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, wherein G is hydrogen or an unsubstituted or substituted aryl moiety which does not contain halogen, boronic acid or boronate radical.

19. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, wherein ~~the~~ a linkage between fluorene and phenylene in the conjugated polymer is on the 1 and 4 positions.

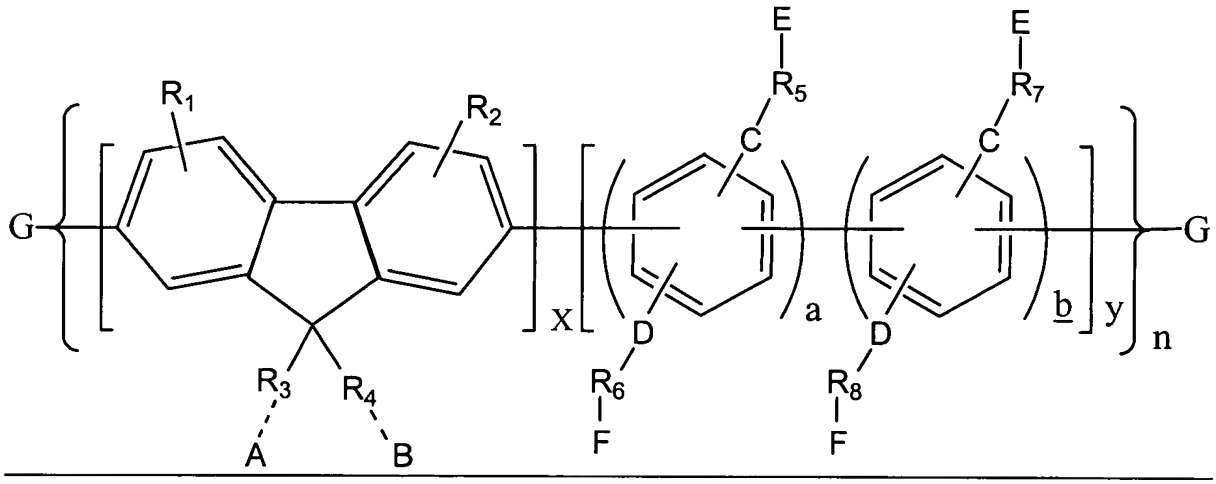
20. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, ~~having~~ wherein the conjugated polymer comprises a backbone comprising extended phenylene units.

21. (Currently Amended) ~~A~~ The conjugated polymer according to ~~any one of claims 1 to 4~~ claim 1, ~~having~~ wherein the conjugated polymer comprises a backbone comprising extended fluorene units.

Claims 22-31 (Canceled)

32. (Currently Amended) A method of forming a conjugated cationic ~~polymer,~~ polymer having a desired solubility in a given solvent, ~~said method~~ comprising:

providing a conjugated cationic polymer ~~of any one of claims 1 to 21~~ comprising the formula:



wherein:

R_1 and R_2 are identical or different and are each H, a straight or branched alkyl, alkoxyl, ester groups or cyclic crown ether groups having from 1 to about 22 carbon atoms;

A, B, E and F are identical or different and are each H, SiR′R″ or NR′R″ (wherein at least one of A, B, E and F is NR′R″); R′ and R″ are independently selected from the group consisting of hydrogen, unbranched or branched alkyl or alkoxyl groups having 1 to about 12 carbon atoms, and (C3 to C10) cycloalkyl groups;

C and D are identical or different and are each H (but are not both H), O, S, CO, COO, CRR′, NR′, SiR′R″, wherein R′ and R″ are as defined above;

R_3 and R_4 are identical or different and are independently selected from linear, branched or cyclical saturated or unsaturated aliphatic moieties that contain at least one heteroatom;

R_5, R_6, R_7 and R_8 are identical or different and are independently selected from linear, branched or cyclical saturated or unsaturated aliphatic moieties that contain at least one

heteroatom and that contain at least one aromatic group, substituted or unsubstituted aromatic moiety;

G is hydrogen, halogen, boronic acid, boronate radical or an aryl moiety;

a and b are independently selected and each is a number from 0 to about 100, wherein if a is 0, b is a number from 1 to about 100 and if b is 0, a is a number from 1 to about 100;

x and y are also independent independently selected and each is a number from 1 to about 100; and

n is a number from 1 to about 1000; and

~~• determining a desired solubility of the polymer in the given solvent;~~

~~•~~ quaternizing terminal amino groups of the conjugated cationic polymer ~~to an extent necessary to increase the solubility of the polymer to the desired solubility~~.

33. (Currently Amended) ~~A~~ The method according to claim 32, wherein quaternizing terminal amino groups of the conjugated cationic polymer comprises quaternizing between about 30% and about 80% of the terminal amino groups ~~undergo quaternization~~.

34. (Currently Amended) ~~A~~ The method according to claim 32, wherein ~~said quaternization is effected by~~ quaternizing terminal amino groups of the conjugated cationic polymer comprises treating the conjugated cationic polymer with an alkyl halide.

35. (Currently Amended) ~~A~~ The method according to claim 34, wherein treating the conjugated cationic polymer with an alkyl halide comprises treating the terminal amino groups ~~the alkyl halide is~~ with bromoethane.

36. (Currently Amended) ~~A~~ The method according to claim 35, wherein ~~the polymer is treated with bromoethane by~~ treating the terminal amino groups with bromoethane comprises stirring the conjugated cationic polymer with bromoethane in dimethyl sulfoxide (DMSO) and tetrahydrofuran (THF).

37. (Currently Amended) ~~A~~ The method according to claim 36, wherein stirring the conjugated cationic polymer with bromoethane in DMSO and THF comprising using ~~the~~ a ratio of ~~DMSO and THF is~~ DMSO:THF of about 1:4, and ~~the stirring is effected~~ wherein stirring the conjugated cationic polymer with bromoethane in DMSO and THF comprises stirring the conjugated cationic polymer at about 50°C for about 5 days.

38. (Currently Amended) ~~A~~ The method according to claim 35, wherein ~~the polymer is treated with bromoethane by~~ treating the terminal amino groups with bromoethane comprises stirring the conjugated cationic polymer with bromoethane in tetrafurohydran.

39. (Currently Amended) ~~A~~ The method according to claim 38, wherein stirring the conjugated cationic polymer with bromoethane in tetrafurohydran comprises ~~the~~ stirring ~~is effected~~ the conjugated cationic polymer at about room temperature for about 24 hours.

40. (Currently Amended) ~~A~~ The method according to ~~any one of claims 36 to 39, comprising the further steps of~~ claim 36, further comprising:

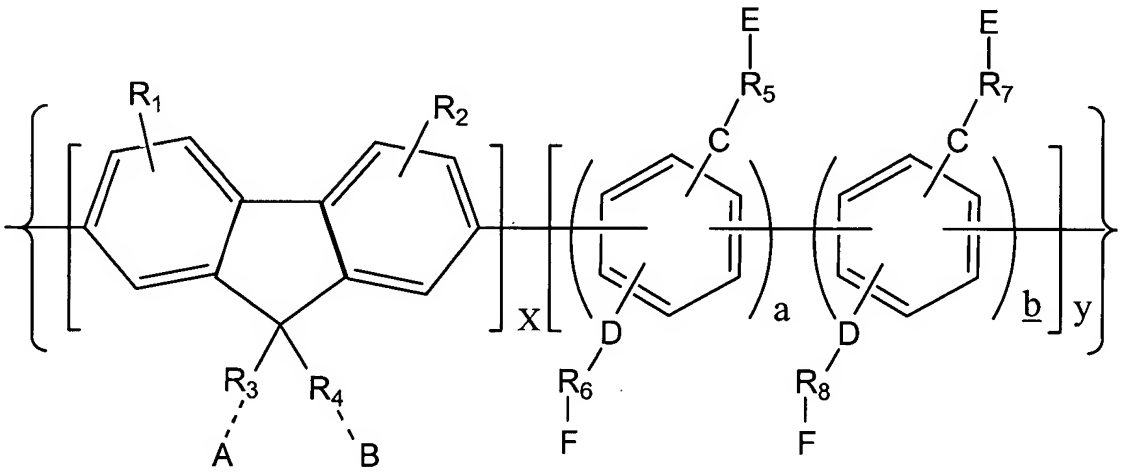
- ~~———~~evaporating the ~~solvents~~ DMSO and THF;
- ~~———~~precipitating the quaternized conjugated cationic polymer;
- ~~———~~washing the quaternized conjugated cationic polymer; and
- ~~———~~drying the quaternized conjugated cationic polymer.

41. (Currently Amended) ~~A~~ The method according to claim 40, wherein ~~the polymer is precipitated by~~ precipitating the quaternized conjugated cationic polymer comprises adding acetone to the quaternized conjugated cationic polymer followed by centrifugation.

42. (Currently Amended) ~~A~~ The method according to claim 40, wherein ~~the washing is effected with~~ washing the quaternized conjugated cationic polymer comprises washing the quaternized conjugated cationic polymer with at least one of chloroform ~~and/or~~ and acetone.

Claims 43-46 (Canceled)

47. (Currently Amended) ~~A conjugated cationic polymer, derived from the polymer of any one of claims 1 to 21, said cationic polymer~~ The conjugated polymer according to claim 1, wherein the conjugated polymer ~~comprising~~ comprises repeating units of the formula:



wherein:

~~(a) R_1, R_2, R_3, R_4, R_5, R_6, R_7, R_8, C, D, a, b, x and y are as defined in claim 1; and~~

~~(b)~~ in at least one of the repeating units, at least one of A, B, E and F is NR′R″R‴, wherein R′, R″ and R‴ are independently selected from the ~~groups~~ group consisting of hydrogen, unbranched or branched alkyl or alkoxyl groups having 1 to about 12 carbon atoms, and (C_3 to C_{10}) cycloalkyl groups.

48. (Currently Amended) ~~A cationic~~ The conjugated polymer according to claim 47, wherein at least one of R′, R″ and R‴ is hydrogen.

49. (Currently Amended) ~~A cationic~~ The conjugated polymer according to claim 48, wherein at least one of A, B, E and F is ammonium.

50. (Currently Amended) ~~A cationic polymer,~~ The conjugated polymer according to claim 49, wherein the ammonium ~~has been~~ is quaternized from at least one amino substituent of the conjugated polymer.

51. (Currently Amended) ~~A cationic~~ The conjugated polymer according to ~~claim 49 wherein, in more than one of the repeating units,~~ claim 49, wherein at least one of A, B, E and F is ammonium in at least one of the repeating units.

52. (Currently Amended) ~~A cationic~~The conjugated polymer according to ~~claim 51 wherein, in more than one of the repeating units,~~ claim 51, wherein ~~more than one~~ at least two of A, B, E and F ~~is~~ are ammonium in at least one of the repeating units.

53. (Currently Amended) ~~A cationic~~The conjugated polymer according to ~~claim 50~~ claim 50, wherein between about 30% and about 60% of ~~the~~ terminal amino substituents in ~~said~~ the conjugated polymer ~~have been~~ are quaternized to ammonium.

Claims 54-59 (Canceled)

60. (New) The method according to claim 32, wherein providing a conjugated cationic polymer comprises:

providing monomer precursors of the conjugated cationic polymer;

quaternizing terminal amino groups of the monomer precursors; and

synthesizing the conjugated cationic polymer from the quaternized monomer precursors.

61. (New) The method according to claim 60, wherein synthesizing the conjugated cationic polymer from the quaternized monomer precursors comprises synthesizing the conjugated cationic polymer by the Suzuki coupling reaction.

62. (New) The method according to claim 60, further comprising determining the desired solubility of the conjugated cationic polymer and calculating the amount of monomer precursors required to form a conjugated cationic polymer having the desired solubility.

63. (New) The method according to claim 60, further comprising determining the desired solubility of the conjugated cationic polymer and quaternizing the terminal amino groups to a degree sufficient to result in the conjugated cationic polymer having the desired solubility.

64. (New) The method according to claim 32, wherein quaternizing terminal amino groups of the conjugated cationic polymer comprises increasing the solubility of the conjugated cationic polymer in a polar solvent.

65. (New) The method according to claim 32, wherein quaternizing terminal amino groups of the conjugated cationic polymer comprises quaternizing the terminal amino groups to an extent necessary to increase the solubility of the conjugated cationic polymer to the desired solubility.